

C1  
Control

in the transistor 824. The first set of coupling devices 834, 836 injects a current into tank #1 that is 90 degrees out of phase with the current injected respectively by the transistors 818, 820. The second set of coupling devices 838, 840 injects a current into tank #2 that is 90 degrees out of phase with the current injected respectively by the transistors 822, 824. The tank impedances causes a frequency dependent phase shift. By varying the amplitude of the coupled signals, the frequency of oscillation changes until the phase shift through the tanks results in a steady-state solution. Varying the bias of the current source controls the gm of the coupling devices. Current sources 812, 816 provide control of VCO tuning. Current sources 810, 814 provide segmentation of the VCO tuning range.

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Page 72, paragraph 4, lines 25-35, to page 73, paragraph 1, lines 2-4, amend to read as follows:

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C2

With an input dynamic range of 50 dB, the RSSI circuit is designed to detect the levels of rejection provided by the polyphase filtering. The outputs of RSSI block 284 and RSSI block 285 are coupled to a comparator 280 where the level of signal rejection of each polyphase filter is compared by comparator 280. The outputs of the RSSI blocks are also coupled to the control logic 286. The control logic 286 determines from the RSSI outputs which polyphase filter has a lower amount of signal suppression. Then, the control logic 286 adjusts the frequency tuning of that filter in an incremental step via the control logic 286. This is done by either increasing the tuned frequency of the first filter (polyphase A) filter 280, or by decreasing the tuned frequency of the second filter (polyphase B) 282 by changing the appropriate 4-bit control word. This process continues in successive steps until the 4-bit control word in each branch are identical, at which point, the RC values of the two polyphase filters are equal. The 4-bit control word provides a maximum deviation of only  $\pm 5\%$ .

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